

ABSTRACT OF THE DISCLOSURE

A duplexer includes a ladder filter and a multimode filter that are formed on the same surface of a predetermined substrate. In this duplexer, a first
5 comb-like electrode of the ladder filter and a second comb-like electrode of the multimode filter have the same layer structure with the same film thickness. The first comb-like electrode and the second comb-like
10 electrode are formed with single-layer films mainly containing aluminum. The relationship among the film thickness h of the first comb-like electrode and the second comb-like electrode, the center frequency f_1 of the frequency band of the ladder filter, and the center
15 frequency f_2 of the frequency band of the multimode filter, is expressed as:

$$\begin{aligned} 300 &\leq h \times f_1 \leq 480 \\ 300 &\leq h \times f_2 \leq 430. \end{aligned}$$

20